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## **Supplemental Material**

### **Long-Term Air Pollution Exposure and Blood Pressure in the Sister Study**

Stephanie H. Chan, Victor C. Van Hee, Silas Bergen, Adam A. Szpiro, Lisa A. DeRoo,  
Stephanie J. London, Julian D. Marshall, Joel D. Kaufman, and Dale P. Sandler

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**Figure S2.** Mean participant NO<sub>2</sub> concentration. Based on residential location at the time of baseline examination, long-term nitrogen dioxide (NO<sub>2</sub>) exposure was predicted for each participant's U.S. census block for the year 2006 in ppb (Novotny et al. 2011). The map shows the mean concentration of NO<sub>2</sub> for U.S. census tracts with participants.

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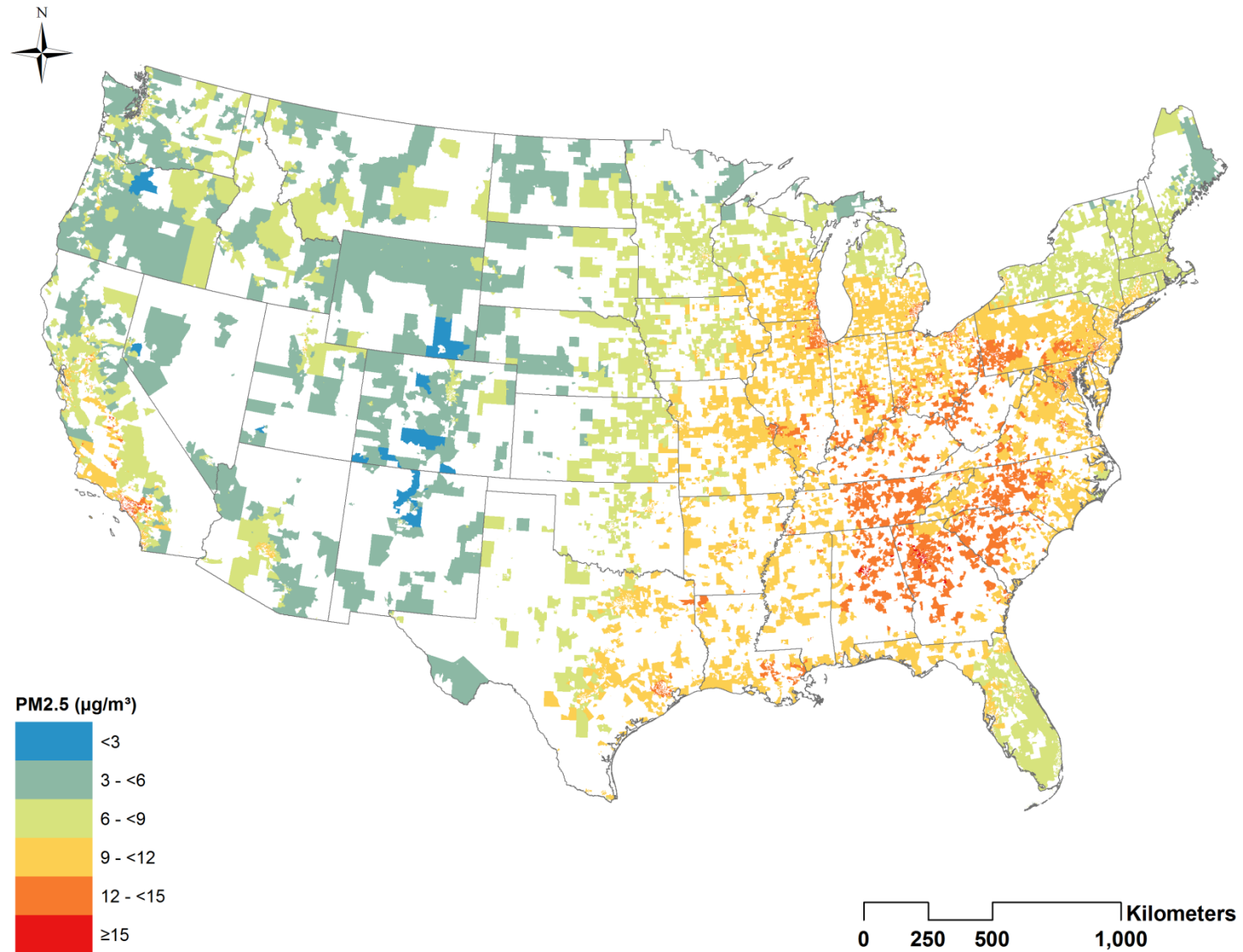
working more than 20 hours per week outside the home, perceived stress score, neighborhood socioeconomic status Z score, urban-rural continuum code, thin plate splines for latitude and longitude, body mass index, waist-to-hip ratio, smoking status, alcohol use, diabetes, hypercholesterolemia, and blood pressure medication use.

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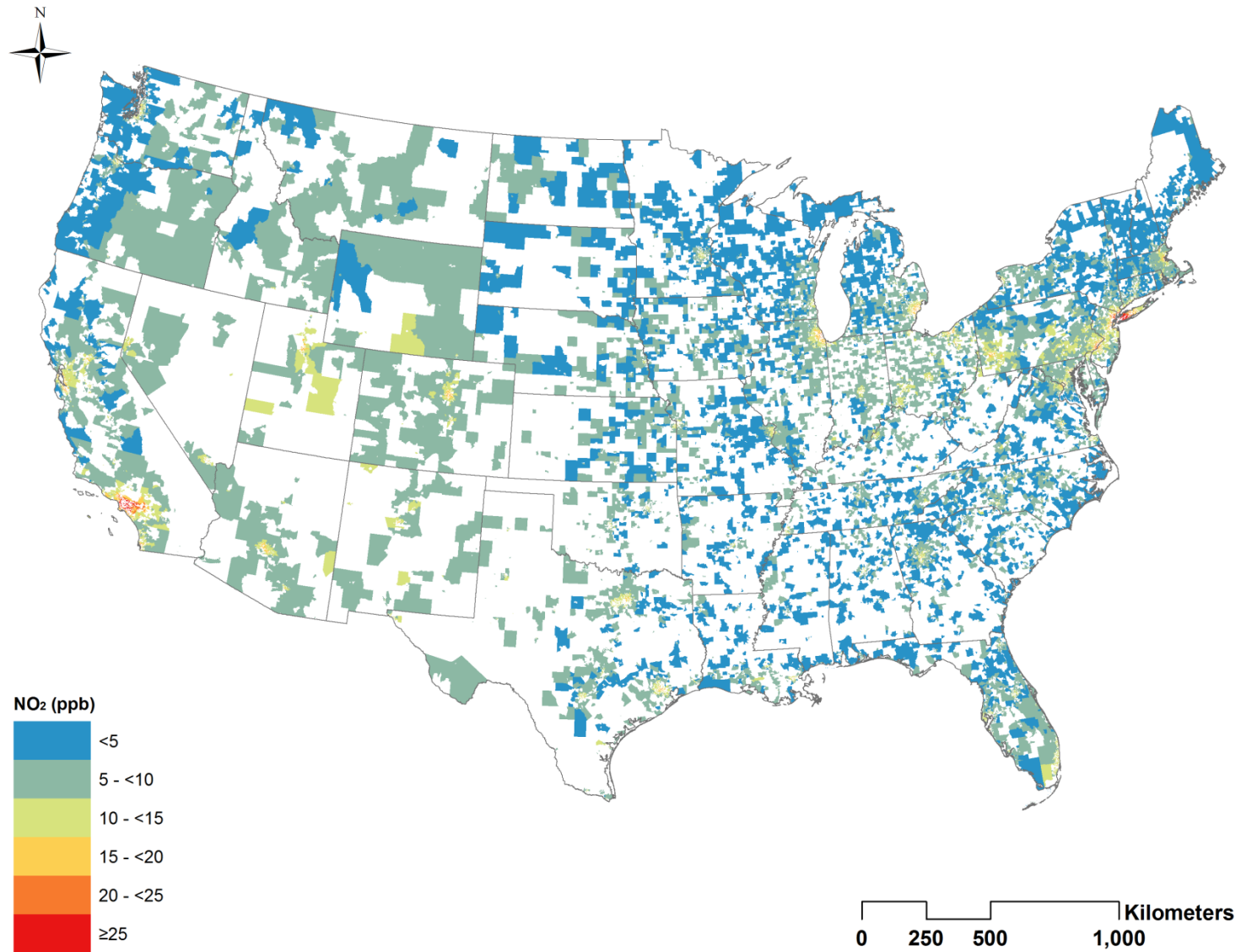
**Table S1.** Co-pollutant models and blood pressure (mmHg), estimate (95% CI).

## References

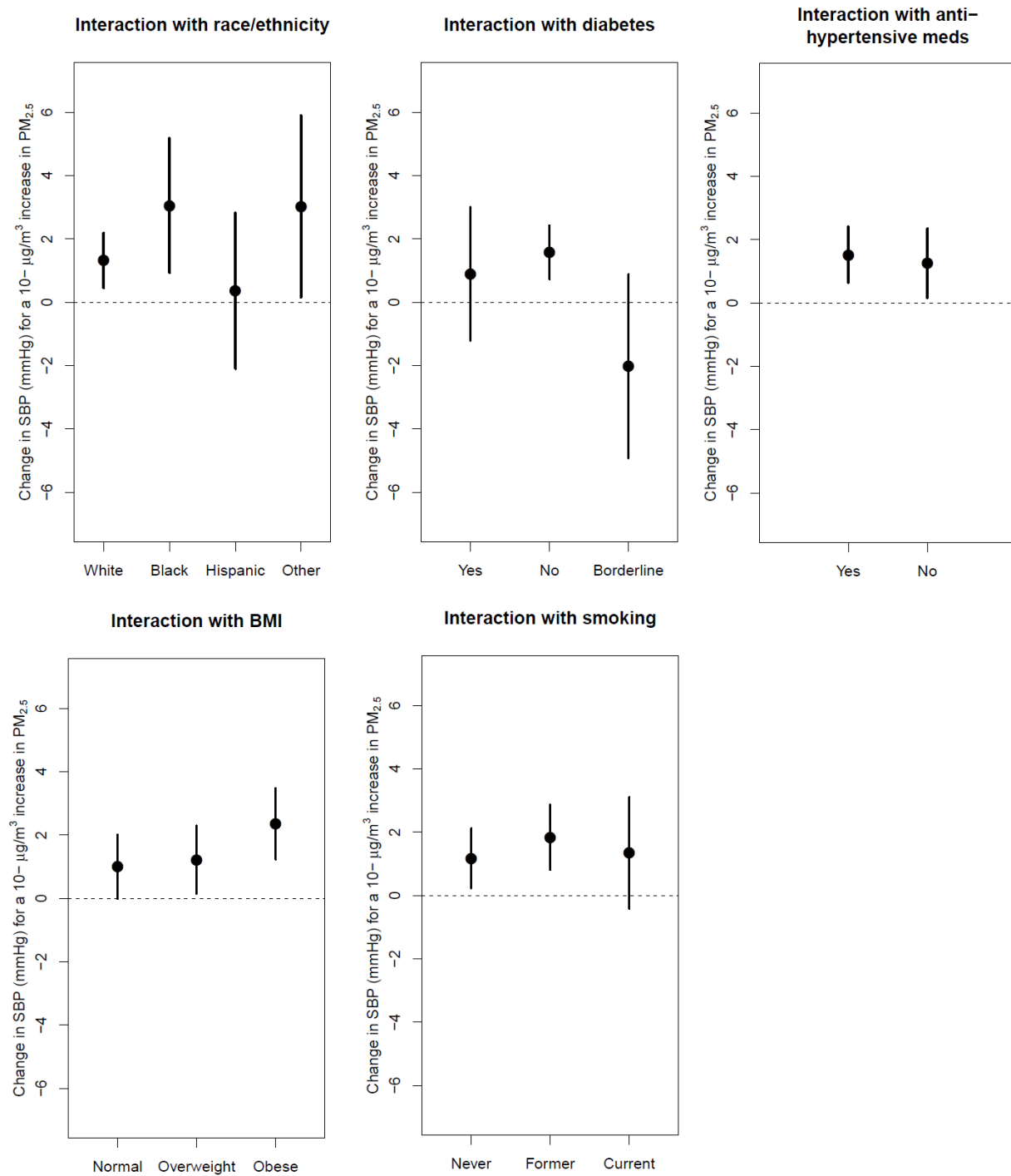
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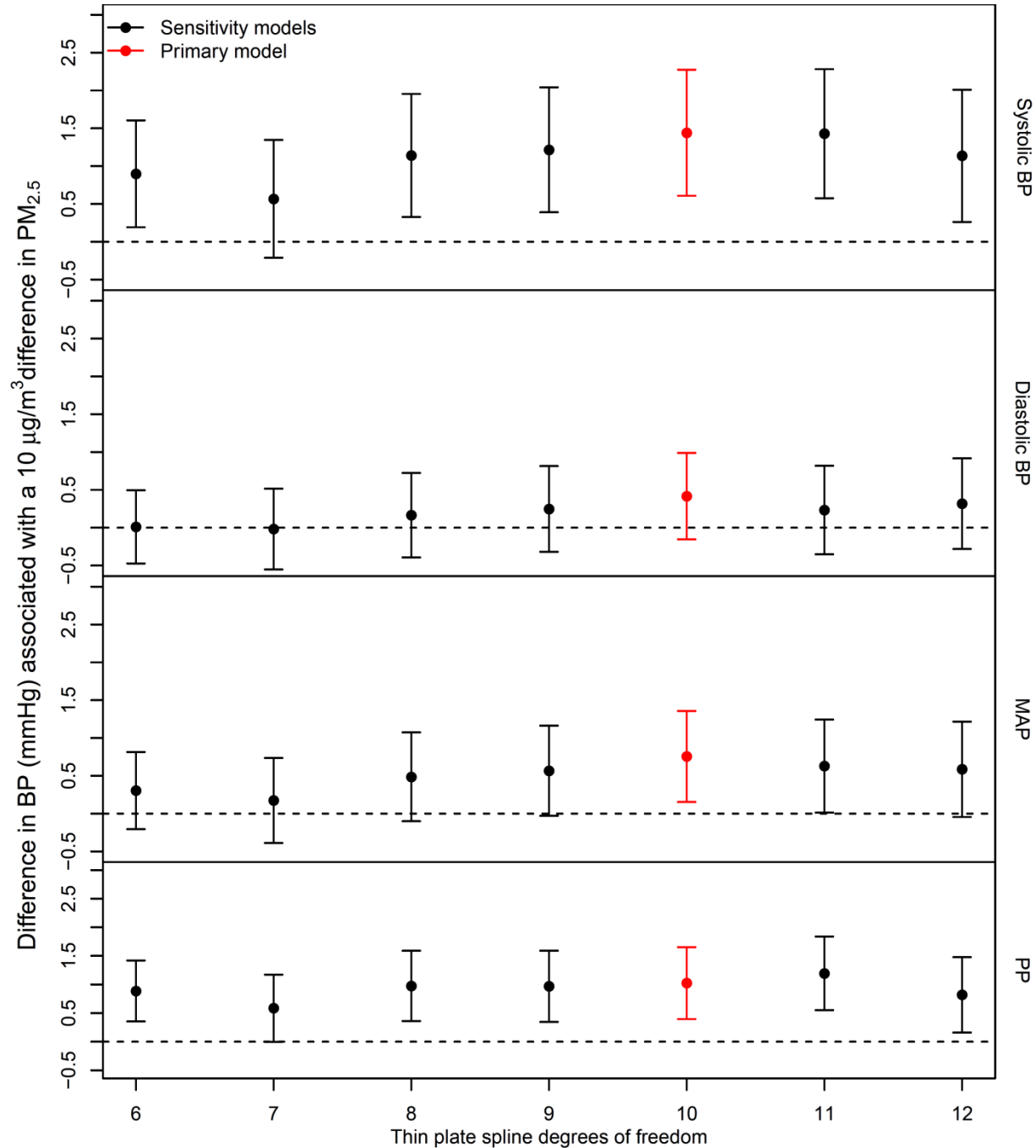
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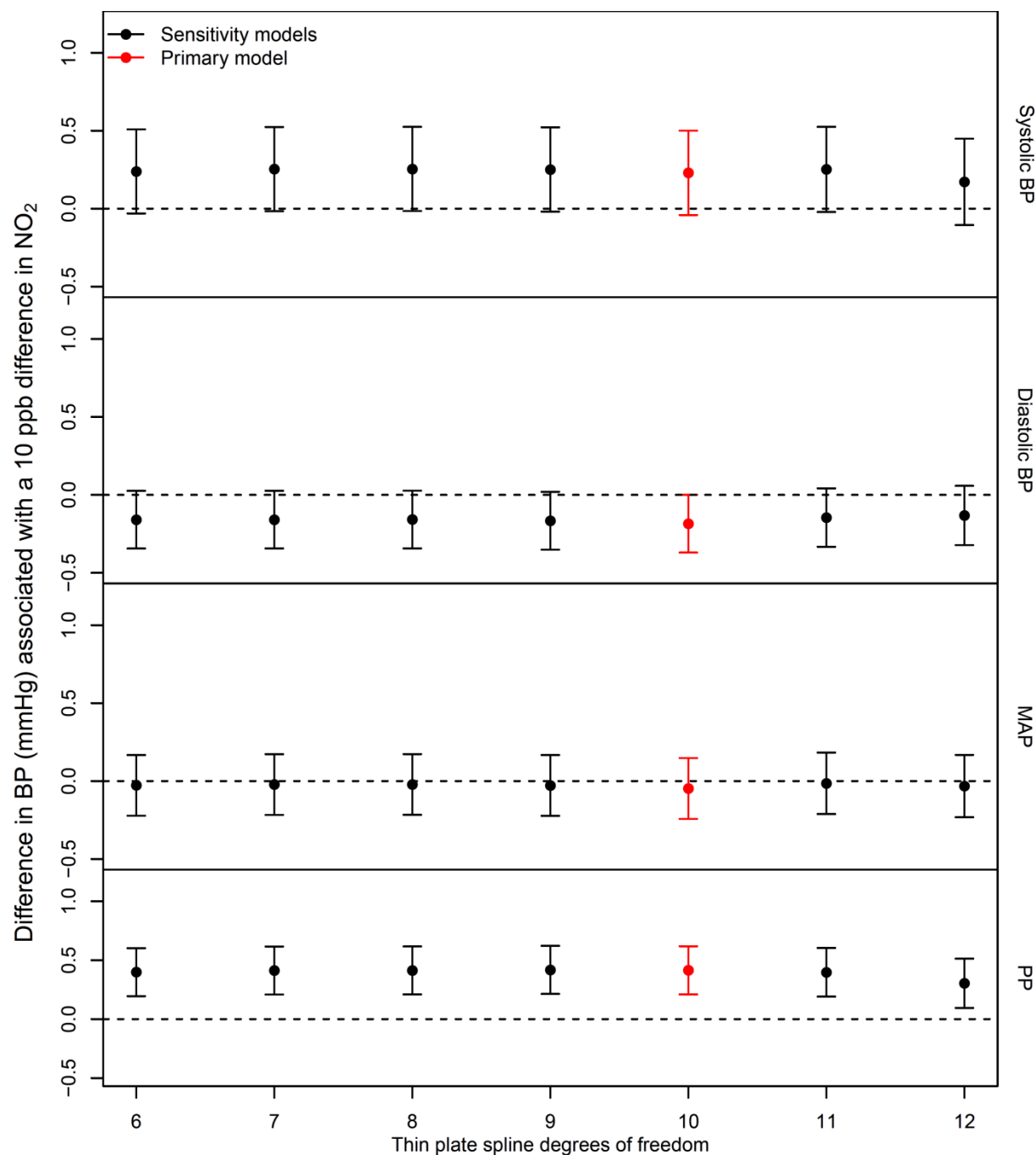
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**Table S1.** Co-pollutant models and blood pressure (mmHg), estimate (95% CI).

Outcome	Per 10 $\mu\text{g}/\text{m}^3$ $\text{PM}_{2.5}$		Per 10 ppb $\text{NO}_2$	
	Estimate (95% CI)	p-value	Estimate (95% CI)	p-value
Systolic Blood Pressure	1.6 (0.5, 2.6)	$p < 0.001$	-0.1 (-0.4, 0.3)	$p = 0.65$
Diastolic Blood Pressure	1.2 (0.5, 1.9)	$p < 0.001$	-0.4 (-0.6, -0.2)	$p < 0.001$
Mean Arterial Pressure	1.3 (0.6, 2.1)	$p < 0.001$	-0.3 (-0.5, -0.1)	$p = 0.02$
Pulse Pressure	0.4 (-0.4, 1.2)	$p = 0.31$	0.3 (0.1, 0.6)	$p = 0.01$

Fully adjusted for age, race/ethnicity, household income, education, marital status, working more than 20 hours per week outside the home, perceived stress score, neighborhood socioeconomic status Z score, urban-rural continuum code, thin plate splines for latitude and longitude, body mass index, waist-to-hip ratio, smoking status, alcohol use, diabetes, hypercholesterolemia, and blood pressure medication use.



## References

- Novotny EV, Bechle MJ, Millet DB, Marshall JD. 2011. National satellite-based land-use regression: NO<sub>2</sub> in the United States. *Environ Sci Technol* 45:4407-14.
- Sampson PD, Richards M, Szpiro AA, Bergen S, Sheppard L, Larson TV, et al. 2013. A regionalized national universal kriging model using Partial Least Squares regression for estimating annual PM<sub>2.5</sub> concentrations in epidemiology. *Atmospheric Environment* 75:383-392.